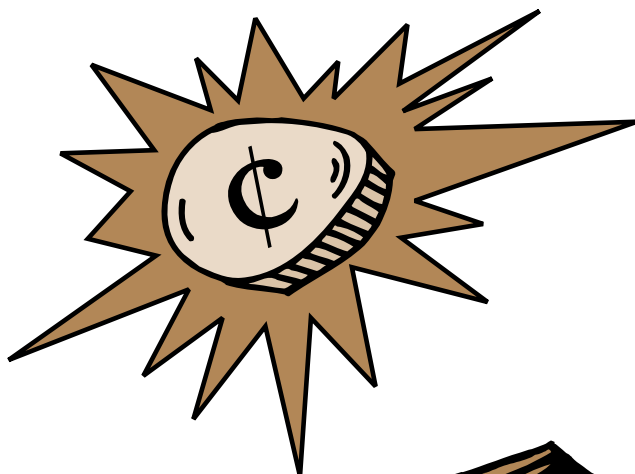


IOWA energy BULLETIN

Department of Natural Resources
Vol. 27, Num. 2, Spring 2001



Summer Energy Improvements Make Dollars & Cents

With the chill of winter gone and the heat of summer ahead, now is the perfect time to improve energy efficiency in the home. Energy analysts forecast that next winter's heating costs will rival this past year's, making simple efficiency measures an even more affordable choice.

Heating and cooling account for almost half of a home's energy consumption. Insulation, properly running equipment, and energy-saving techniques can lower those costs by 10 to 50 percent.

Insulation

Unless a home is properly insulated, half of its indoor air could escape. Check the insulation in the



attic, walls, basement and crawl spaces to ensure it meets recommended R-value levels for your area – the higher the R-value, the better resistance to heat transfer.

Weatherization

Weatherizing a home can save 10 percent or more on a home's energy bills by reducing air leaks. A quick way to prevent air leaks is to caulk, seal, and weatherstrip all seams,

cracks, and openings.

**Next winter's natural gas
prices should rival the 2000-2001
heating season's.**

Programmable Thermostat

To save another 10 percent, install a programmable thermostat, which adjusts the home's temperature for different parts of the day. While shopping for a programmable thermostat, look for the Energy Star® label.

Water Heaters

Water heating is a home's third largest energy expense, accounting for 14 percent of a utility bill. Low-flow showerheads and toilets, a water-heater blanket, or even replacing old,

continued on page 3

In This Issue.....

Message from Sharon

Tahtinen 2

New DNR Director 2

National Rebuild Award 3

Analyst's Angle 4

Ethanol Marketshare 4

Fuel Efficiency Tips 5

Efficiency Workshop 6

Wind Hybrid Study 7

Repowering the Midwest ... 7

Events Calendar 8

Message from Sharon Tahtinen

Net Metering a Home Run for Iowa

Renewable energy earned a home run this spring when the Federal Energy Regulatory Commission (FERC) upheld net metering arrangements in Iowa.

As background, net metering allows an entity such as a school, farm or residence to produce alternative power for its own electricity needs and be billed on a “net” basis, getting full value for the electricity it produces and uses. If additional power is then needed, the facility purchases it from the utility at retail rates. If the facility produces more power than it uses, it sells the excess to the utility at a lower, avoided-cost rate.

FERC’s decision, which upholds the Iowa

Utilities Board’s net metering requirements, could not have come at a better time for Iowa, especially with growing concerns about energy supplies, prices and the need for increased electricity capacity.

The ruling helps remove a barrier for small renewable energy producers in this state, offering an avenue for them to develop their own supply needs on fair and equitable terms.

Additionally, it opens the door to more choices. Any Iowan – not just large utilities with the resources to enter into major contracts – can pursue clean, energy alternatives for their own power needs.

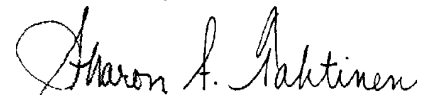
That is what renewable energy development is all about: giving the state options to diversify its energy resources, to have greater economic opportunities, and to seek out energy sources that protect our air, water, health and natural resources. Every Iowan should have the opportunity to do the same.

While net metering still hasn’t won the entire ball game (additional

2A

court rulings could take weeks and months to be resolved), this definitely is a decision for the record books. It is rewarding and thrilling to see renewable energy development hit one out of the ball park.

Sincerely,



Sharon A. Tahtinen
Energy Bureau Chief



Director Jeffrey Vonk
Iowa DNR

DNR Welcomes New Director

Jeff Vonk is the new director of the Iowa Department of Natural Resources, starting March 14, 2001.

“I am proud to be in Iowa, working with citizens and the DNR staff in our continued efforts to protect

Iowa’s environment,” said Jeff. “Promoting energy efficiency and renewable energy will continue to be critical goals for our agency.”

Jeff most recently served as California state conservationist for the U.S. Department of Agriculture’s Natural Resources Conservation Service (NRCS). Prior to that position, he worked for four years in Washington D.C. for the NRCS, and from 1990 to 1994 as Iowa state conservationist.

Jeff was born and raised in New York state. He has bachelors degree in Forest Biology from Syracuse and a masters degree in Wildlife Management from the University of Maine. He began his career with the NRCS in 1979 and has worked in New York, Lima, Peru, and the Caribbean.

The DNR-Energy Bureau looks forward to Jeff’s leadership as it continues working to expand energy efficiency and renewable energy use in Iowa.

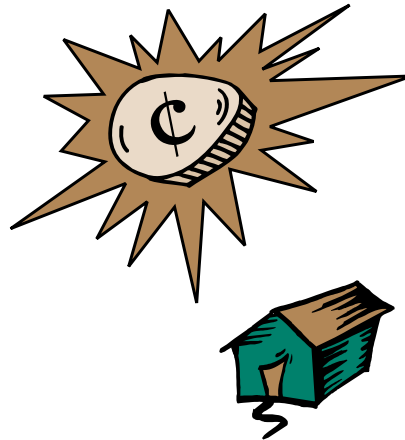
Home Improvements

Continued from page 1...

inefficient equipment all significantly affect hot water use and efficiency. Also turn down the water heater thermostat to 120 degrees.

Landscaping

Landscaping makes a home look beautiful and is a natural way to reduce energy bills. Using computer models, the Department of Energy predicts that three trees correctly placed around the house can save a



furnace serviced, and replace air filters every three months.

Alternative Heating and Cooling Sources

Other heating equipment alternatives can save significantly on a home's heating costs. Heat pumps, which rely on electricity, provide three times more heating than the amount of energy they consume. They also cool the home in the summer by pumping warm indoor air outside.

Another option is solar heating. A home that is designed with

passive solar designs, such as south-facing windows, heat-absorbing materials, and other techniques, can reduce heating costs by 50 percent.

Energy Savers Booklet

These and many other tips can be found in the U.S. Department of Energy's *Energy Savers: Tips on Saving Energy and Money at Home*. To obtain a copy of this book go to: www.eren.doe.gov/consumerinfo/energy_savers. Or contact Craig Stark at (515) 281- 4739; e-mail: Craig.Stark@dnr.state.ia.us for the booklet or more information.

How Much Can You Save On Heating and Cooling?

Programmable Thermostat	10 percent
Caulking, Weather Stripping, Sealing	10 percent
Landscaping	25 percent
Insulation and Weatherization	30 percent
Heat Pumps	40 percent
Solar Heating	50 percent

From the U.S. Dept. of Energy

household \$100 to \$250 a year. Shade from trees in the summer will help keep a house cool, and will allow sunlight in during winter.

Heating and Cooling Equipment

Now is the time to research replacing an old furnace or air conditioner with energy-efficient equipment. Again, look for the Energy Star label and be sure they are properly sized. A furnace that is 90-percent energy efficient can save \$60 in annual heating costs, compared to an 80-percent efficient furnace. Savings can be even higher in a year of high energy prices, or if compared to old furnace models. Also get the

Iowan Honored with National Rebuild Award

John Root of Muscatine has been given the national Rebuild America Partnership Leader Award from the U.S. Department of Energy (DOE). Root is energy services advisor at Muscatine Power and Water and local coordinator for his community's Rebuild Iowa program

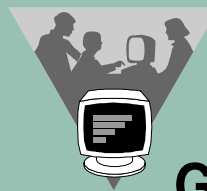
Root received his award March 14, 2001 at a national forum in Atlanta. He was honored for his work in energy efficiency through Energize Muscatine, a program he launched in 1999.

As a result of Root's activities, Muscatine building owners installed energy-saving measures in 25 facilities, representing nearly 750,000 square feet during the program's first year. The improvements cost \$475,000, saving \$32,000 annually and avoiding 12 tons of sulfur oxides emissions and 456 tons of carbon dioxide annually.

Energize Muscatine is part of the DNR's Rebuild Iowa program, which receives support from the U.S. DOE's Rebuild America initiative. Rebuild Iowa helps communities identify, implement and finance energy efficiency improvements, which improves the environment, saves money and creates jobs.

For more information, contact Rebecca Spiess with the DNR at (515) 281-5007; e-mail: Rebecca.Spiess@dnr.state.ia.us





Gasoline Prices and the Summer Driving Season: A Mirror Image of 2000?

The forecast for Iowa's summer gasoline prices is shaping up to be a reflection of last year's situation: low inventories, increased demand and potential price spikes.

Energy experts agree that today's gas picture is virtually identical to last year, when prices jumped \$0.34 from May to June, reaching \$1.77 a gallon – a record for both the fastest climb and highest price ever seen in the state.

Now in 2001, the DNR estimates gas prices will range from \$1.48 to \$1.60 per gallon this summer. But if unplanned events occur – such as a pipeline break or unrest in a foreign country that curtails supplies, it is possible Iowans could pay up to \$2 per gallon for gasoline.

The real swing factor this year is the economy. An economic down-

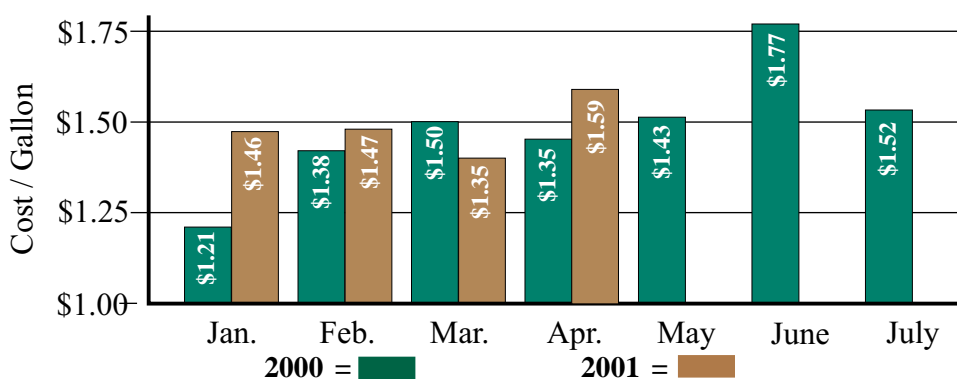
turn usually reduces fuel consumption, decreasing the likelihood of inventory-related problems. As America's economic picture continues to trend downward, it could have a direct impact on the price consumers pay for a gallon of gasoline.

Overall, Iowans should be

prepared for higher-than-average gasoline prices for the 2001 summer driving season, causing another energy price crunch to consumer pocketbooks.

For more information, contact David Downing at (515) 281-4876; e-mail: David.Downing@dnr.state.ia.us

Comparing 2000 and 2001 Self-Serve Gasoline Prices



Ethanol Market Share Hits Record High

Iowans are filling their vehicles with ethanol-blended fuels at record levels. The state's market share for ethanol-blends rose above 55 percent in January 2001, the highest market share ever.

Iowa's five ethanol plants pumped out 440 million gallons of ethanol in 1999, and strong

demand also increased interest in new ethanol plants. Currently, seven new plants with planned combined annual capacity of 165 million gallons are in various stages of development in Iowa. Another ten plants are being discussed.

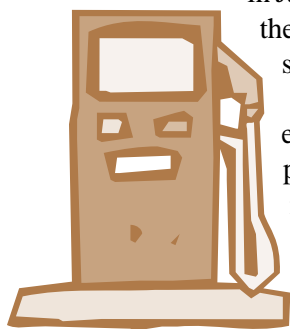
Increased use of ethanol keeps Iowa's economy growing, generating \$1.7 billion in economic activity and adding approximately \$730 million to the value of the state's corn crop. Ethanol demand boosts Iowa's state and local tax receipts by \$111 million –

the highest of the top ten corn-growing states.

Ethanol also is good for Iowa's environment by lowering carbon monoxide emissions by 30 percent and carbon dioxide emissions by 27 percent.

Continued increased demand for ethanol-blended fuels is forecast, creating excellent opportunities for Iowa's economy and environment.

For more information, contact Jennifer Moehlmann with the DNR at (515) 281-7018; e-mail: Jennifer.Moehlmann@dnr.state.ia.us



Cedar Rapids Buses to Run on Biodiesel

The 60 buses in the Cedar Rapids bus fleet will now run on biodiesel, a cleaner burning fuel made from soybean oil that reduces air emissions. The city rolled out the new program in March 2001.

The bus fleet is using B20, a fuel blend of 20 percent biodiesel and 80 percent petroleum diesel. According to industry sources, pure biodiesel has similar horsepower and fuel economy as conventional diesel, but produces 78 percent less greenhouse gas emissions while significantly reducing toxins and other air pollution.

For details, contact Jennifer Moehlmann with the DNR at (515) 281-7018; e-mail: Jennifer.Moehlmann@dnr.state.ia.us

\$ tips for better fuel efficiency

With high gasoline prices projected for this summer, maximizing vehicle fuel efficiency is important.

Consider this: a vehicle that gets 15 miles to the gallon, and travels 3,000 this summer — when prices are projected to average \$1.50 per gallon — will spend \$300 on gasoline, compared to \$180 for a vehicle that obtains 25 miles to the gallon.

Fuel efficiency not only saves money, it also keeps the environment safe. Transportation is the

single greatest contributor to air pollution, including carbon monoxide, carbon dioxide and toxins. A car that gets 25 miles per gallon instead of 20 avoids 10 additional tons of carbon dioxide released in the air over the lifetime of a vehicle.

To obtain better gas mileage:

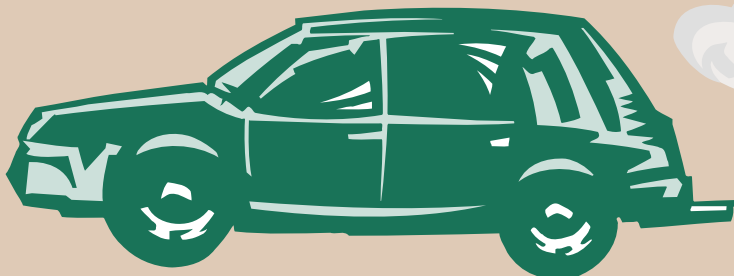
- 1. Tune up the engine.** A poorly tuned engine uses 10 to 20 percent more gasoline.
 - 2. Inflate tires to proper levels.** Underinflated tires can cause fuel consumption to increase 6 percent.
 - 3. Avoid “start and stop” traffic** to improve fuel economy 5 to 10 percent.
 - 4. Change air filters regularly.** A clogged filter can increase fuel use by 10 percent.
 - 5. Drive the speed limit.** Fuel efficiency goes down significantly from 55 mph to 70 mph.
- For more tips on fuel economy and a complete comparison guide on fuel efficiency of cars and trucks go to the U.S. EPA's Web site: www.fueleconomy.gov

Who Ya Gonna Call? 1 (866) TAILPIPE

The DNR is introducing a new program to help lower air pollution on Iowa's roadways. Smoking Tailpipe is a voluntary, informational program that gives citizens an opportunity to report vehicles emitting excessive, smoking emissions.

Drivers who observe a smoking tailpipe from another vehicle can call 1 (866) TAILPIPE to report the problem; be sure to include a license plate number and description of the car. Helpful information will be sent to the owner of the poorly operating vehicle.

For more information, contact Sheri Waltz at (515) 281-4927; e-mail: Sheri.Waltz@dnr.state.ia.us



Did You Know?

One poorly operating car can emit the same amount of pollutants as 10 to 30 properly running cars.

Did You Know....

Schools spend more on energy than on computers and textbooks combined.



Source: *The Alliance to Save Energy.*

SCHOOL ENERGY SOLUTIONS FOR THE BOTTOM LINE

**June 6, 2001 - Ankeny, IA
Free One Day Workshop**

Energy costs are a growing concern for Iowa schools. This **free** workshop for school decision makers will give tools to save money, improve infra-structures and increase comfort.

**See Events Calendar on
page 8 for details!**

You've Got the POWER!

**Visit the DNR Energy Booth
at the
Iowa State Fair!**

August 9 - 19, 2001

**In the DNR Building
near the
Fairgrounds West Entrance**

**Featuring geothermal heat
pump systems, fuel cells,
energy efficiency tips,
transportation ideas, and
more!**

Governor's Iowa Environmental Excellence Awards

Leaders in Environmental Stewardship

It's time to apply for the 2001 Governor's Environmental Excellence Awards. Governor Vilsack and the State of Iowa invite organizations, businesses and individuals to be recognized for their leadership and innovation in managing the state's natural resources.

Innovative, result-oriented strategies can take many forms, including:

- ◆ Developing energy efficiency or renewable energy technologies,
- ◆ Creating new technologies or processes that improve the environment,
- ◆ Reducing waste generation,
- ◆ Creating natural resource protection and enhancement projects, such as watershed protection,
- ◆ Establishing educational or prevention programs that result in environmental improvements,
- ◆ Creating programs or processes that balance economics with the environment,
- ◆ And much more.

Who Can Apply:

The following organizations are encouraged to apply:

- ◆ Community/Local Government
- ◆ Large Business and Industry (More than 200 employees)
- ◆ Small Business and Industry (Up to 200 employees)
- ◆ Institution/Public Sector

Facility (hospital, school, college, etc.)

- ◆ Agriculture (operation, farm or other ag-related business or organization)
- ◆ Service/Civic/Nonprofit Organization (Kiwanis, Lions Club, Pheasants Forever, etc.)

Awards will be given for several areas, including comprehensive Environmental Excellence Awards, along with special project awards in energy efficiency/renewable energy, air quality, water quality, waste management and habitat development.

Two additional awards will honor exemplary leadership in natural resource conservation: an Individual Leadership Award and a Youth Environmental Citizenship Award.

The awards are sponsored and coordinated by the Governor's Office, the Iowa Department of Natural Resources, the Iowa Department of Agriculture and Land Stewardship, the Iowa Department of Economic Development and the Iowa Department of Education.

Deadlines:

Applications are due by September 28, 2001. Awards will be presented in December 2001.

For An Application:

For more information contact:
Bob Castelline at (515) 281-0879;
e-mail: Bob.Castelline@dnr.state.ia.us
or Katie Nevins at (515) 281-8655;
e-mail: Katie.Nevins@dnr.state.ia.us

DNR Hybrid Wind Study for Iowa

A new study sponsored by the DNR evaluates the costs and capabilities of wind hybrid systems, which combine wind energy with other power sources for electricity generation.

The study analyzes how wind can be matched with natural gas or diesel generators, hydropower, solar and other energy sources for maximum reliability.

Conducted by Tom Factor of the Iowa Wind Energy Institute, Fairfield, the study is available on the Internet and provides a calculator for inputting a location's wind resources, electricity needs and other factors. The information can then be used to compare

For More Information

visit
[www.state.ia.us/dnr/energy/
programs/renewable/
wind.htm](http://www.state.ia.us/dnr/energy/programs/renewable/wind.htm)

a variety of potential hybrid systems for their costs and ability to meet the locale's electricity needs.

For more information contact Tom Factor, Iowa Wind Energy Institute, at (641) 472-9828; e-mail: tfactor@lisco.net, or contact Julie Tack with the DNR at (515) 281-8518; e-mail: Julie.Tack@dnr.state.ia.us

Vilsack Signs "Industries of the Future" Compact

Gov. Tom Vilsack signed a compact with the U.S. Dept. of Energy (DOE) to endorse a state-federal partnership to help industries, on April 19 at the State Capitol in Des Moines.

Vilsack signed the agreement with Denise Swink, deputy assistant secretary of DOE, to endorse continued collaboration between the State of Iowa and the DOE's Industries of the Future initiative.

Industries of the Future works with energy-intensive sectors to improve efficiency

and productivity while reducing waste. Iowa has received almost \$200,000 in grants to develop assessments and assist the metal casting and agricultural industries with energy efficiency and waste reduction programs. The programs are being implemented by Iowa State University and the Iowa DNR.

For more information, contact Angela Chen at (515) 281-4736; e-mail: Angela.Chen@dnr.state.ia.us

New Report Offers Clean Energy Plan for Midwest

A study released this winter in Iowa and other Midwest states outlines clean energy strategies, along with economic and environmental outcomes, for the region. *Repowering the Midwest: The Clean Energy Development Plan for the Heartland* was released by the Environmental Law and Policy Center of the Midwest (ELPC), Chicago. It uses sophisticated modeling to compare the Midwest's energy future using "business-as-usual" practices versus implementing a clean energy plan. The report calls for expanding investments in energy efficiency and for

increasing supplies of renewable electricity, including wind and biomass.

The report was developed in conjunction with a steering committee that included Citizens Action Coalition of Indiana, Dakota Resource Council, Iowa RENEW, Izaak Walton League of America, Minnesotans for an Energy-Efficient Economy, RENEW Wisconsin and the Union of Concerned Scientists. The complete report is available at: www.repowermidwest.org

IOWA energy BULLETIN

Published by the Energy and Geological Resources Division, Iowa Department of Natural Resources.

Jeff Vonk, Director
Larry Bean, Administrator,
Energy and Geological
Resources Division
Sharon Tahtinen,
Energy Bureau Chief
Monica Stone,
Executive Officer,
Building Energy Management
Angela Chen,
Executive Officer,
Energy Planning
and Technology Transfer
Julia C. Tack, Editor
Katie Nevins,
Energy Information Intern



Programs and activities are available to all potential clientele without regard to race, color, national origin, sex, handicap or age. Anyone who feels that he or she has been discriminated against should send a complaint within 180 days to the Iowa Civil Rights Commission, 211 E. Maple, 2nd Floor, Des Moines, IA 50319.

This material was prepared with the support of United States Department of Energy grant number DEFG47-80CS769097.

However, any opinions, findings, conclusions or recommendations expressed herein are those of the authors and do not necessarily reflect the views of the DOE.

For additional copies or to comment, please write or call: Editor, Iowa Energy Bulletin
Wallace Building
Des Moines, Iowa 50319-0034
(515) 281-8665
(515) 281-6794 (fax)
E-Mail: Julie.Tack@dnr.state.ia.us



Printed on Recycled paper



Calendar of Events

June 6. Ankeny, Iowa. *School Energy Solutions for the Bottom Line.* A free, one-day conference to help schools save money, improve infrastructure and increase comfort. Designed for superintendents, private college presidents, school boards and key decision makers. Sponsors for this event include the Iowa Department of Natural Resources, National Association of State Energy Officials, and Rebuild America-Energy Smart Schools, a program by the U.S. Department of Energy. For more information, contact Roger Ringo with The Energy Group at (515) 271-5070, e-mail: TEGroger@aol.com

July 18-19. Aberdeen, South Dakota. *Governors' Ethanol Coalition Meeting.* Held in conjunction with the American Ethanol Coalition's 14th Annual Meeting and Ethanol Conference, July 19-20. Contact Christopher Quick at (402) 471-2867.

August 9-19. Des Moines, Iowa. *Iowa State Fair, DNR Building.* Come and see the energy efficiency and renewable energy booth during the Iowa State Fair. Contact Jennifer Moehlmann at (515) 281-7018, e-mail: Jennifer.Moehlmann@dnr.state.ia.us

August 29. West Des Moines, Iowa. *Ethanol: Fueling Iowa's Economy.* This one-day workshop will educate legislators, regulators, financiers and the media about the environmental benefits of increased ethanol consumption and production in Iowa. For more information contact Jennifer Moehlmann at (515) 281-7018, e-mail: Jennifer.Moehlmann@dnr.state.ia.us

September 8-9. Hiawatha, Iowa. *The Iowa All Energy Expo.* Contact Tom Snyder at (319) 875-8772, e-mail: studegh@earthlink.net

IOWA DEPARTMENT OF NATURAL RESOURCES
Wallace State Office Building
Des Moines, IA 50319-0034

BULK RATE
U.S. POSTAGE
PAID
DES MOINES, IA
PERMIT NO. 1195